FlyBy Math™ Alignment
Arizona Mathematics Standard Articulated By Grade Level
Grade 7

Strand 1: Number Sense and Operations

Concept 1: Number Sense
Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.

Standard	*FlyBy Math*™ Activities
PO 6. Locate integers on a number line.	--Plot points on a schematic of a jet route, on a vertical line graph, and on a Cartesian coordinate system to describe the motion of two airplanes.

Concept 3: Estimation.
Use estimation strategies reasonably and fluently.

Standard	*FlyBy Math*™ Activities
PO 1. Solve grade-level appropriate problems using estimation.	--Predict outcomes and explain results of mathematical models and experiments.

Strand 2: Data Analysis, Probability, and Discrete Mathematics

Concept 1: Data Analysis (Statistics)
Understand and apply data collection, organization and representation to analyze and sort data.

Standard	*FlyBy Math*™ Activities
PO 1. Formulate questions to collect data in contextual situations.	--Conduct a simulation of each airplane scenario
PO 3. Determine when it is appropriate to use histograms, line graphs, double bar graphs, and stem-and-leaf plots.	--Choose among tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.
PO 4. Interpret data displays including histograms, stem-and-leaf plots, circle graphs, and double line graphs.	--Use tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.
PO 5. Answer questions based on data displays including histograms, stem-and-leaf plots, circle graphs, and double line graphs.	--Use tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.
PO 9. Solve contextual problems using histograms, line graphs of continuous data, double bar graphs, and stem-and-leaf plots.	--Use tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.

Strand 3: Patterns, Algebra, and Functions

Concept 4: Analysis of Change
Analyze change in a variable over time and in various contexts.

Standard	*FlyBy Math™* Activities
PO 1. Analyze change in various linear contextual situations.	--Compare airspace scenarios for both the same and different starting conditions and the same and different rates.

Strand 4: Geometry and Measurement

Concept 3: Coordinate Geometry
Specify and describe spatial relationships using coordinate geometry and other representational systems.

Standard	*FlyBy Math™* Activities
PO 1. Graph data points in (x, y) form in any quadrant of a coordinate grid.	--Plot points on a schematic of a jet route, on a vertical line graph, and on a Cartesian coordinate system to describe the motion of two airplanes.

Concept 4: Measurement - Units of Measure
Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.

Standard	*FlyBy Math™* Activities
PO 8. Compare estimated to actual lengths based on scale drawings or maps.	--Calculate and measure the position and time of simulated aircraft. Represent that motion using tables, graphs, equations, and experimentation.